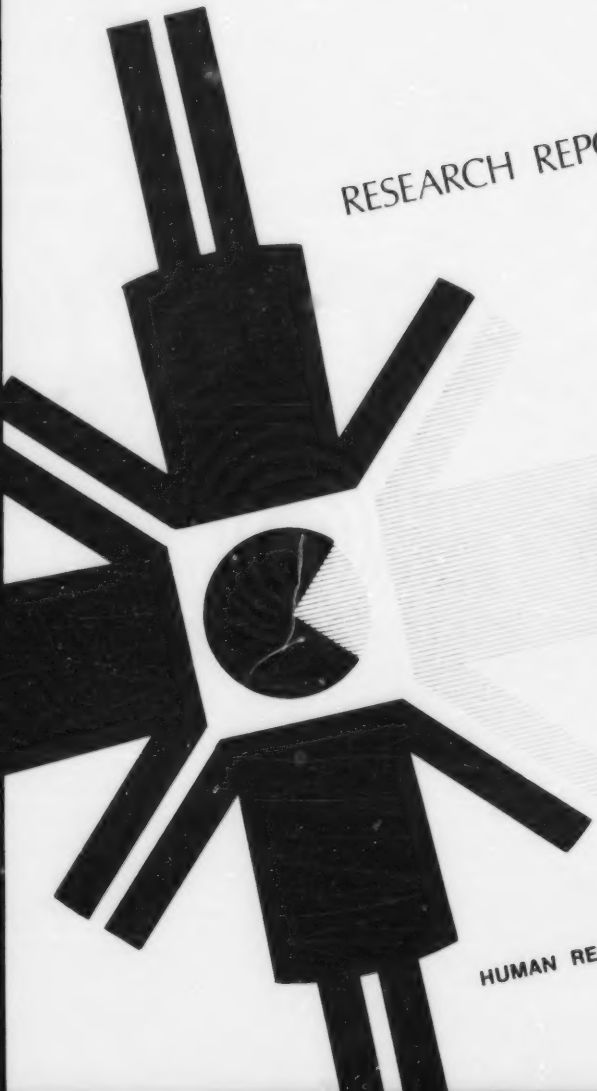

RESEARCH REPORT

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a review of EDUCATIONAL OPPORTUNITY alberta 1970

E.J. Ingram and L.W. West

HUMAN RESOURCES RESEARCH COUNCIL

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A REVIEW OF
EDUCATIONAL OPPORTUNITY
IN ALBERTA, 1970

Prepared by

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with assistance from

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Human Resources Research Council

January, 1971

Foreword

Early in 1971, the Human Resources Research Council sponsored the preparation of a series of resource papers on various aspects of life in Alberta.

The purposes of the papers were: (1) to develop conceptual frameworks for analysing these various aspects of the quality of life; (2) to assemble the best available data relating to them; and (3) to identify gaps in data.

These papers, in turn, were to be used in two ways: first, as the initial input to a Social Audit -- a report to the people of Alberta on the quality of life of its citizens; second, as something of an inventory of needed research -- an invitation to scholars to assist in filling gaps in our knowledge about various aspects of life in this Province.

The Social Audit is now in preparation; it is due for release in late 1971.

This paper on Educational Opportunity in Alberta is one of the series.

Though it has been prepared, reproduced and distributed by the Human Resources Research Council, views expressed in it are those of the author(s) and not necessarily those of the Council.

August, 1971

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PART I ASSESSMENT OF OPPORTUNITY

The Desire to Extend Educational Opportunity

Contemporary educational institutions have evolved in response to the deep-seated beliefs of individuals and society that many educational goals can be pursued more effectively by formal institutions than by individuals or informal groups working in isolation. Such goals have been many and varied, with emphasis shifting from one to another over time. Various sectors of society also have held different educational goals with shifting emphasis. The general goals of most educational institutions in the Western world, however, are similar in content and broad in scope. The statement of goals for secondary education in Alberta, for example, includes personal development of students, growth in family living, growth toward competent citizenship, and occupational preparation.

Some groups within our society hold that the main purpose of education is to increase the capabilities of the young to contribute to the economic productivity of society and to the prestige and power of the state. On the other hand, some believe that the major function of our schools is to develop free and creative individuals. Still others believe that both these functions can be accommodated by our educational institutions.

Alberta society, by and large, appears committed to improving the quality of life for all citizens, and since education provides a major vehicle for achieving this end, most Albertans actively support the extension of educational opportunity. The principle of "equality" of educational opportunity is also generally supported. Certainly, no-one having the motivation and ability to learn should be denied a chance to do so because of age, race, sex, religion, place of residence, or socio-economic status.

Within our society, there is growing pressure to examine educational institutions and to assess the degree to which they are in fact providing opportunities for all. Where opportunity gaps are found between various segments of the population, it is widely believed that these gaps should be narrowed as quickly as possible.

Present Modes of Assessing Opportunity

In order to determine our success in providing educational opportunities, we have devised various methods for gathering, analyzing, and reporting information about our educational

institutions and the people they serve. These methods, by and large, reflect our concept of opportunity, and the particular goals we have emphasized.

It is widely believed that in order to extend educational opportunity, we must increase educational "inputs" in the form of facilities, staff, curriculum, finances, etc. This belief is based upon the tacit assumption that "more" equals "better." From this assumption it follows that if we provide the same *quantity* of services and facilities (i.e., "inputs") to various sub-groups of the population, we are then providing equal educational opportunities.

An assessment technique which is presently in vogue[1] takes the position that we must examine the "outputs" as well as the "inputs" of the educational system in order to improve our evaluations of opportunity. Proponents of this concept believe that equal educational opportunities are reflected by equal outputs in the form of student achievement as indicated by marks on standardized achievement tests, the degree of social and economic mobility of graduating students, the proportion of students who enroll in institutions of higher learning, etc. Assessment of educational opportunities in terms of educational outputs requires the collection of new types of data and new ways of analyzing and reporting this information.

Both concepts of opportunity discussed above are based on the assumption that: (a) there is a standard set of educational goals established by society which reflect the values of the majority, and (b) the role of our educational institutions is to move all people toward the achievement of these standard goals in the most efficient and effective ways possible. Such assumptions, however, are increasingly being challenged.

Increasing Concern About the Educational System

A growing number of people, especially young people, are questioning the very purpose of education as well as the assumptions that have been made about educational opportunity. Although the concerns that are commonly expressed are hardly novel, it is significant to note that involved consumers of the educational

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1 James S. Coleman. *Equality of Educational Opportunity*, (Washington, D.C., U.S. Department of Health & Welfare), 1966.

service, rather than detached philosophers, are posing questions:

How relevant is contemporary education? For what purpose and for whom is it relevant? Is its major purpose to preserve the *status quo*, to develop the manpower requirements of the state, or to propagate the values of the majority? Education which emphasizes such purposes, it is contended, treats human development as a *means*, rather than as an *end*. It regards people as resources or chattels to be exploited, rather than as persons of worth and dignity.

Should not an education for free men be directed toward responsible self-determination, individual happiness, and self-actualization? What kind of education is most appropriate for the young who must live in a future quite different from the present? Is our major aim to increase the gross national product, or to improve the quality of life for all? Can the economic models of cost-effecitveness and accountability, as presently conceived, be appropriately applied to all phases of education? Are not some of the greatest benefits of education intangible, and delayed in their occurrence or their value relative to the future course of history? Is education to be for the high academic achiever, for the socio-economic elite, or for all persons regardless of their present gifts or potential contribution to the present establishment?

The growing ranks of "concerned" persons seem to take the position that our educational institutions have, in practice, placed undue emphasis on preserving the *status quo*, increasing the gross national product, and assuring the social mobility of an elite. They further contend that education must be made more relevant to all individuals and that it must focus primarily upon "quality of life" rather than upon "quantity of wealth." Many view the present educational establishment as being hypocritical in that it gives lip service to one system of values, yet practices another. Alienated youth are becoming impatient with this perceived hypocrisy. Although a minority of these "concerned" people appear selfishly individualistic, the majority equate a human concern for the individual with improved community and group living and with the overall welfare of mankind.

This minority of public concern has caused educators, social scientists, and policy makers to re-examine the educational system and the concept of educational opportunity. The debate about these concerns seems to be polarizing public opinion, thereby making political choice more difficult.

Emerging Trends in Educational Thought and Policy

Modern communications technology makes information readily accessible and exposes youth to a variety of cultures and alternate life styles. Narrow and dogmatic efforts toward indoctrination thus have been rendered ineffective and unacceptable. Young people are insisting that school programs be "value-open," reflecting faithfully the broad and varied spectrum of values held by the world community. Today's youth must learn to live in a "global village" in which the social, moral, ecological, and survival problems are likely to be greater than man has faced before. The accumulated wisdom of the past, no doubt, will be of continued value, but the solutions of the past are clearly inadequate for coping with this future. Although there are no "pat" answers to be taught, there are problem solving skills to be learned. Accordingly, the Hall-Dennis report recommends that the major aim of the school should be "to enable young people to investigate freely, discuss, evaluate, think and decide."[1]

Schools may be used for the shaping of a servile populace or, alternatively, for the development of free men. If the presumed "good" of the state is to take priority over individual happiness and self-actualization, the school must provide training for the roles prescribed by society. If, on the other hand, we choose to emphasize the development of free and creative individuals, a large degree of self-determination, enquiry, and questioning must characterize the learning activity.

Marshall McLuhan[1] has suggested that the perceptual focus of every generation may be characterized as "rear-view mirror." We are more attuned to the immediate past than to the present or future. If the McLuhan assumption is tenable, a real danger inherent in a rigid role-training approach to education is the possibility of conditioning the young to an age which is already past. The virtue of a flexible and liberal approach, however, lies in its potential for developing the skills necessary to cope with a changing, unseen, and uncertain future.

Futuristic forecasts contained in the report of a Delphi study entitled *Social Futures Alberta - 1970-2005* prepared for the Human

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1 E.M. Hall and L.A. Dennis, et al. *Living and Learning: The Report of the Provincial Committee on Aims and Objectives of Education in the Schools of Ontario.* (Toronto: Ontario Department of Education), 1968.

Resources Research Council and the Commission on Educational Planning by the Westrede Institute,[1] support this type of emphasis. In general it is predicted that by 2005 the educational system will be much more responsive to the needs of individuals. There will be increased emphasis on flexibility of programs and the responsibility of the student (and his parents) for his own education.

Educational practitioners are also becoming cognizant of this emerging emphasis. A group of twelve Canadian educators at a conference held to consider a Research and Development policy for Canada,[2] recommended that one of the major areas of needed research and development was that of "devising and testing methods and strategies designed to achieve personalization of learning." This group also recommended that greater attention be given to the development of "strategies and structures which will provide continuous education for all members of society." They also stated that "Education is a lifelong process and citizens should be able to get the education they want when they need it."

As indicated by the *White Paper on Human Resources Development*[3] the Government of Alberta of record clearly supports the alternative of developing free and creative individuals. The White Paper takes the position that from the standpoint of preserving individual liberty, "it is particularly important that emphasis be laid on the development of the individual human being, rather than on society itself," and that "society exists to enhance the development of free and creative human beings." The White Paper further contends that we should avoid the error of those who define Utopia in terms of the ideal society, rather than the self-actualized individual, and who are thus committed to coercive measures to force individuals into some prescribed mold. As a province, we are urged to regard as our Utopia "whatever kind of society emerges from a free and creative citizenry." The position taken by the White Paper thus appears quite consistent with the emerging trends in educational thought outlined above.

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1 Harold J. Dyck. *Social Futures Alberta: 1970-2005.* (Edmonton: Westrede Institute), 1970.

2 *Towards a Canadian Educational Research Policy.* (Ottawa, Canadian Council for Research in Education), 1969.

3 E.C. Manning. *A White Paper on Human Resources Development.* (Edmonton: Government of Alberta), 1969.

Toward a Phenomenological Model of Opportunity

Consistent with current trends in educational thought and practice is a phenomenological model or concept of opportunity. Such a model is compatible not only with common usage of the term, but also with current psychological knowledge that opportunity generally is perceived as a subjective phenomenon. In short, different individuals perceive different "life chances" as opportunities. What an individual regards as an opportunity and what he does not is relative to his unique frame of reference or system of values. A phenomenological study of opportunity therefore must be idiographic or specific to the individual.

Although no particular situation may constitute an opportunity for all people, at all places and at all times, several universally applicable criteria may nevertheless be incorporated into a phenomenological definition of opportunity. These criteria may be regarded as the essential or defining attributes (i.e., the necessary and sufficient conditions) of the "opportunity" concept.

This report takes the position that for any given individual an "opportunity" is a function of:

1. his hopes, desires, wants, needs, and aspirations

2. the availability of a "vehicle" or means to the achievement of these ends

3. the extent to which barriers and constraints thwarting the attainment of his goals may be overcome

4. his *awareness* of a favorable confluence of circumstances for the realization of his goals.

An assessment of educational opportunity consistent with this general definition of the concept again will require the development of new and improved methods for collecting, analyzing, and reporting educational data. An educational opportunities index (EOI) somewhat analogous to the Dominion Bureau of Statistics' consumer price index (CPI) may prove useful. Ideally, what an individual would want to know from such an index is whether or not he is better off (i.e., whether he now has greater educational opportunities than he had before). To satisfy this individual requirement, a separate "audit" for each individual based upon his personal goals and the availability of relevant educational services would be necessary. Such a venture in data collection and analysis, however, would be highly costly and hardly practicable.

Fortunately, compromise solutions to the appraisal of educational opportunity may prove worthwhile to the individual. It may be quite feasible to derive opportunity indices for specific and identifiable subgroups within the population, on the basis of simple data. A comparison of such indices would provide information regarding potential inequalities in educational opportunity.

Alternatively, the distribution of educational opportunity, the range of educational opportunities, and the average educational opportunity within a community may be computed from data collected from a stratified sampling of its members.

It may now be instructive to explore in some detail the implications of such a concept of educational opportunity and some of the indicators relevant to its assessment.

Indicators of Educational Opportunity

Within a phenomenological perspective which views opportunity as a function of the hopes, desires, and aspirations of the individual, education provides "opportunity" only insofar as it serves as a means for the realization of personal goals. Since the wants and needs of individuals differ, equal and standard educational inputs do not assure equal opportunities for all people. Moreover, equal and standard educational outputs cannot be considered indicative of equal educational opportunities.

When students complain of the irrelevance of education, no doubt they are lamenting the irrelevance of their particular educational experience for the achievement of their personal aspirations. Educational institutions today are challenged to develop systematic programs of instruction and to provide those materials, facilities, resources and learning experiences which permit each student to satisfy his unique educational needs for self-actualization. Insofar as educational institutions can meet this challenge they will at once offer greater opportunities and become more relevant to individual learners.

The subjective experience of satisfaction normally attends progress toward the attainment of aspirations. Student and community satisfaction with the educational services provided thus may be regarded as one of the better indicators of educational opportunity. Yet of all service institutions within society today, education perhaps pays least regard to the satisfaction of its customers.

Unfortunately, satisfaction is a subjective experience,

and therefore difficult to assess. The Hall-Dennis report on aims and objectives of education offers some rather observable behavioral indicators. If the student is eager to learn, if he is in fact learning, if each day leads to new learning challenges, if he communicates openly and freely with his teachers and peers, and if his behavior is characterized by poise and assurance "with a sparkle in his eye and enthusiasm in his voice" then an educational opportunity to achieve personally relevant goals can be inferred to exist.

Regarding opportunity as a function of aspiration has other implications worthy of note. All too easily we may generalize that in some absolute sense, modern youth have greater educational opportunity than previous generations have had. Contemporary youth, through mass communication, advertising, and entertainment have become aware of the merely possible. Never before have youth been so thoroughly conditioned to want what they have not. Perhaps our society has created social and material aspirations far more rapidly than it has been able to provide the means and overcome the barriers to their realization. Thus, contemporary education as an instrument for the achievement of personal aspirations, may now indeed offer relatively less opportunity than in the past.

Relevant, stimulating, and growth-facilitating programs of learning are indicative of the degree to which educational opportunity exists within a community. So, too, is the availability of choice among programs and the absence of artificial barriers such as unreasonable or unnecessary admission requirements. The provision of various traditionally recognized inputs such as appropriate materials, facilities, and competent instructional personnel certainly may help to generate opportunity. Educational opportunity may be further increased by serious efforts to remove obstacles and constraints to the achievement of desired outcomes. Such constraints originate within both the individual and his environment.

Limited economic resources frequently constitute an external barrier to educational accomplishment. Another external constraint faced by a large number of Alberta youth is the geographic distance separating them from the institutions which could provide the means to educational advancement. Socio-cultural factors frequently serve as constraints to educational achievement. Educational opportunities are limited by artificial barriers such as discrimination and social or economic disparity.

Among the internal or student constraints are physical and psychological handicaps. Limited vision or hearing, lack of motor coordination, and poor general health, all of which restrict

educational achievement, may be amenable to correction or remediation. Special provision for the handicapped thus increases their opportunity.

Socio-psychological impediments to learning, such as apathy, alienation, inadequate self-image, and emotional disturbance may also be alleviated to some degree through specialized pupil personnel services. A provision for such services is therefore indicative of opportunity.

Since learning, especially at advanced levels, is based on a background of previous learning, inadequate prerequisite skills, abilities, and knowledge often militate against educational accomplishment. The existence of special educational services which provide for the diagnosis and remediation of learning difficulties and for individually prescribed instruction, therefore also serves as an indicator of educational opportunity.

The foregoing concept of educational opportunity emphasizes the necessity of individual awareness of a favorable confluence of "life-chances." When the wants and desires of students, and the availability of appropriate instructional programs and other educational resources are unknown, and when the individual student is aware of the student services designed to reduce barriers and constraints to his achievement, an opportunity does not exist.

The nature rather than the existence of a counselling service is indicative of educational opportunity. Counselling based on a quasi-medical model and oriented toward "curing" students of their idiosyncracies or individuality through shaping, controlling, directing, or channelling their behavior may, in effect, be a denial of opportunity. A counselling service explicitly based upon an "opportunity model" which respects the worth and dignity of the individual and his right to self-direction may, however, greatly extend educational opportunity.

Through self-exploration and the exploration of "life-chances," the student comes to differentiate among his values, to set priorities within his aspirations, to discover educational programs which meet his needs, and to become aware of the special services available to assist him in overcoming various barriers to educational achievement.

Educational opportunity is more likely to exist where a conscious effort and commitment is made to its provision. Hence, the systematic organization and orientation of all institutional services toward the unifying goal of providing maximum educational opportunity for the maximum number of students is perhaps the most significant of all indicators.

PART II A REVIEW OF THE EDUCATIONAL SYSTEM

Although a new concept of educational opportunity and a more adequate technology for assessing opportunity are probably desirable, we cannot await these developments before gathering data for an evaluation of our educational systems. Accordingly, for the purpose of this review an attempt has been made to collect and collate as much pertinent data as possible in the time available. In some areas more data was available than could profitably be used, and thus a selection had to be made. In other areas, the type of data considered necessary was unavailable. The following review is based on the best data available at the time of writing. The major data sources were the Department of Education, the Universities Commission, the Alberta Colleges Commission, and the Seastone study.[1]

Institutions, Programs, Enrolments and Costs: K-12

As of September 1970, the public and separate school systems of Alberta operated 1,326 schools, of which 540 were located in cities and 786 in rural areas. These schools range in size from one multi-room, 140-teacher senior high school to 94 one-room, one-teacher elementary-junior high schools. Twenty-four of the 31 schools having 48 or more teachers are located in Edmonton and Calgary.

The 1,326 public and separate schools of Alberta offer the usual Grade 1 to 12 academic, arts, physical education, industrial arts, and home economics programs. Twenty-five larger composite high schools also offer technical and vocational programs which provide training in 15 vocational areas for some 4,500 high school students.

Efforts to maximize the learning opportunities of all students have resulted in a broad variety of instructional organizations. The most popular of such experiments in instructional re-organization include:

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1 D. Seastone. *Economic and Demographic Futures in Education: Alberta 1970-2005*. (Edmonton: Worth Commission on Educational Planning and the Human Resources Research Council), 1970.

a) ability and interest grouping

b) special classes for special needs

c) remedial classes in basic learning skills

d) modified, ungraded, and continuous progress plans

e) special classes for less able students (e.g., trades and services or pre-employment programs)

f) open area and team teaching

g) streaming (matriculation, business education, vocational, and general) in the senior high school.

A considerable increase in semestering also took place during the past year. This reorganization provides an effective means whereby students can make up deficiencies in a short time. It also permits students to repeat courses or change programs without losing a complete year. The Department of Education reports that the drop-out rate has been decreased wherever semesters have been introduced.

Summer schools in high school subjects were offered during the past year by the Edmonton and Calgary Public School Boards, Mount Royal College (Calgary), Lethbridge College, and Alberta College (Edmonton). Summer schools, like semester systems, allow students to repeat courses or compelte requirements without loss of a full year.

In addition to the efforts made by many school systems to serve better the individual needs of the majority of students through program modification and instructional reorganization, several larger school systems operate special classes to provide for the handicapped minority. Such special classes cater to the mildly retarded, the visually impaired, the hard of hearing, and those with other learning difficulties - perceptual, physical, medical, emotional, neurological, psychological, and unspecified. Although speical classes outside Edmonton and Calgary have increased in number over the past year, they are largely limited to providing for the mildly retarded child.

Enrollments in special classes generally are low, and available facilities and well-qualified teachers appear to fall short of necessary requirements. On the basis of a CELDIC

publication entitled *One Million Children,* [1] it would appear that in 1970 upwards of 80,000 Alberta children and youth up to the age of 19 needed special educational facilities or programs. Special classes currently provide for only a small fraction of this number.

The Province of Alberta operates a school for the deaf located at Edmonton. Assistance is given to parents in the form of a grant for transportation to and from the school. The school also provides for the residential accommodation of students whose homes are scattered throughout the province. It operates for a full ten-month academic year with 19 classes of students, ranging in age from five to eighteen. Equivalent educational opportunities for the blind are available only at schools located in British Columbia and Ontario.

Severely retarded children, in general, must attend schools operated by local associations for the mentally retarded. With Departmental assistance for capital costs, three new schools for the mentally retarded were built last year at Sherwood Park, Wetaskiwin, and St. Paul. In January, 1969, the Calgary Public School System absorbed two schools previously operated by the Calgary Association for the Mentally Retarded. This marked the first time that a school board in Alberta took direct responsibility for the education of the trainable mentally retarded child.

A form of "special education" that is well developed and apparently successful in Alberta is that of correspondence courses. These courses in 1968-69 provided access to the regular public school curriculum for 17,480 students, who for some reason were unable to attend classes. During the past six years enrollments in correspondence courses have increased by 44 percent. High school courses account for nearly 90 percent of the total.

Further efforts to extend the educational opportunities of Alberta youth are evident in the school broadcast services provided by the Department of Education. Curriculum-based radio and television programs are produced and broadcast daily during the school year primarily through arrangements with the BBC. The CBC and private networks also provide some excellent educational programs of their own.

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1 Commission on Emotional and Learning Disorders in Children (CELDIC), *One Million Children.* (Canada: Leonard Crainford for CELDIC), 1970.

Several pilot programs in educational television are being undertaken in Alberta:

a) Calgary and Region Educational Television (CARET) with studios located at SAIT produces for, and broadcasts to, 24 Calgary elementary and junior high schools.

b) The Metropolitan Edmonton Educational Television Association (MEETA), which operates Canada's first community ETV station, transmits 40 hours of programming per week to a potential audience of 500,000.

c) County of Mountain View Educational Television (COMET), a county project which is subsidized by the Department of Education, broadcasts regularly to seven schools within the county.

d) The Southern Alberta Educational Television Association (AETVA) is an association of 24 educational authorities in Southern Alberta which circulates video-tape packages among its various schools.

As of June 30, 1970 there were 232 approved private kindergartens distributed throughout the province -- 62 in Edmonton, 91 in Calgary, 28 in other cities, 51 in rural areas. Although kindergartens are not supported financially by the provincial government, except for two pilot projects in Edmonton and Calgary, they are inspected regularly by provincially appointed superintendents of schools. Pre-school and kindergarten programs are available to probably less than 4 percent of Alberta children between the ages of three and five. As in the case of special classes, rural areas are generally less able to provide pre-school programs.

In 1969-70, Alberta's 1,326 public and separate schools were staffed by 21,493 certificated teachers including administrators, counsellors, librarians, school psychologists, school social workers, special therapists, instructional consultants, and other ancillary personnel. By 1969, more than 50 percent of the teaching force had completed four or more years of university education, up from 25 percent a decade earlier.

These 1,326 schools provided for the education of 409,433 registered students in 1969-70. Of this number 223,827 students were at the elementary level, 101,000 at the junior high school level, and 84,606 at the senior high school level.

Figures 1, 2, and 3 illustrate the rising enrolment, especially at the senior high school level, and the growing urban concentration.

According to the Seastone projections, enrolments will reach 432,000 by 1975. Elementary school enrolments will decrease slightly during the next five years, but secondary school enrolments will increase substantially. The projected enrolment figure for 1980 is 415,000; for 1990 it is 509,000; and for 2005 it is 610,000. To educate these numbers cost $726 per student in 1969. Figure 4 details the rising total expenditure of school boards since 1961. Figure 5 details the per pupil cost since 1953. Seastone predicts that by 1980 the per pupil cost of education will increase to at least $1,300.

Participation and retention rates of pupils remains high until the end of Grade 8, when the legal school-leaving age (16) begins to have a significant effect. For the year 1963-64 "drop-outs" constituted 4.2 percent of the Grade 9 enrolment, 3.6 percent of the Grade 10 enrolment, 4.9 percent of the Grade 11 enrolment, and 3.8 percent of the original Grade 9 enrolment. Male drop-outs generally outnumbered the female.

There is some indication that the proportion of students who drop out of school has decreased since 1963. Enrolments at the Grade 10 to 12 level are increasing more rapidly than the population growth.

A study by the Department of Education indicates that, of a total of 21,731 withdrawals from school in 1968, somewhat more than 1/3 (7,795) went on to further training, about 1/3 (7,246) obtained employment, and somewhat less than 1/3 (6,690) found other destinations, including marriage and unemployment.

Most available educational statistics are of the "input" variety. Output data is relatively scarce. Numbers of graduates or "completers" of formal programs in particular institutions are sometimes available, but measures of achievement for specific skills are almost non-existent.

In 1969-70, 18,300 students received high school diplomas and 7,787 received matriculation standing. In 1968-69 fully 9.4 percent of the corresponding Grade 1 class (enrolled 11 years previously) graduated; and in 1967-68, 27.8 percent of the corresponding Grade 1 class enrolled in universities or community college.

The educational attainment of the labor force is also

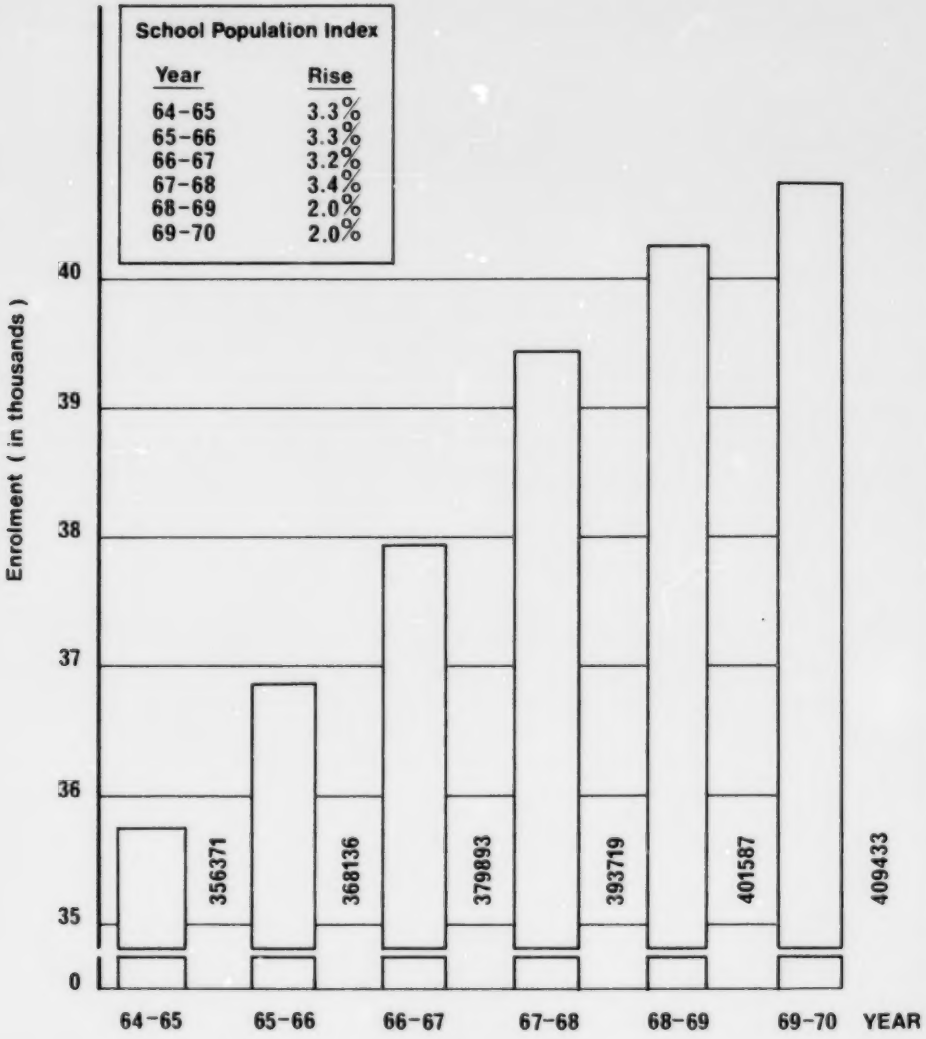

Figure 1: School Population 1964-1970
(from Department of Education 1969 Report)

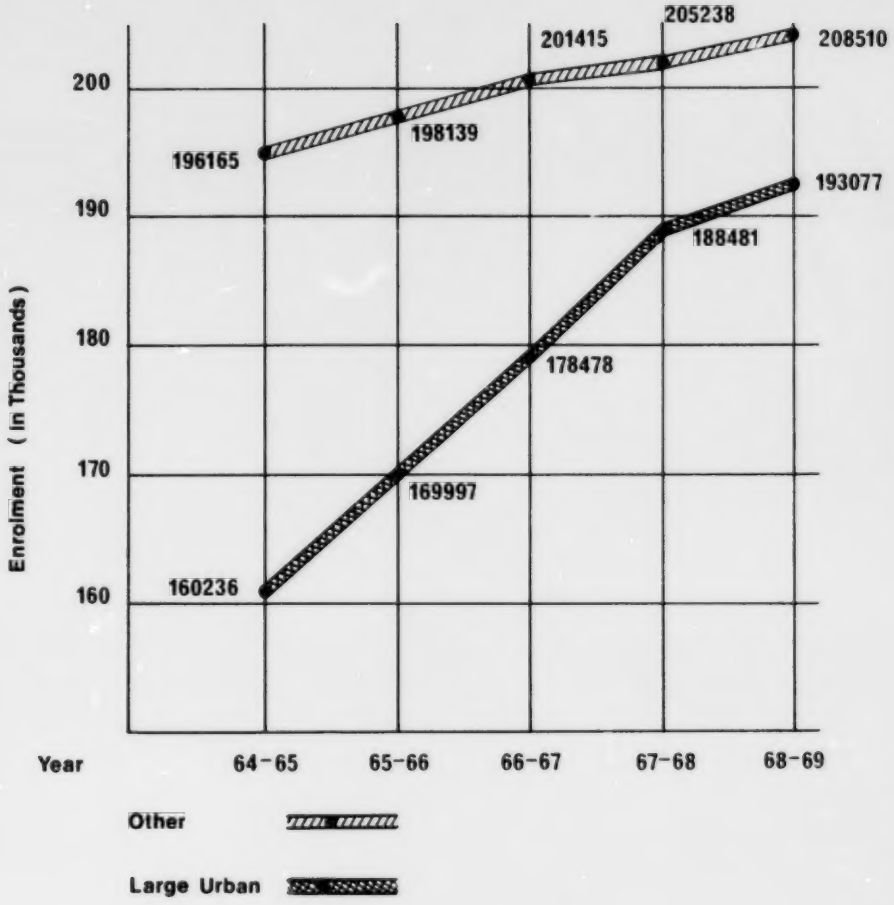

FIGURE 2

COMPARISON OF URBAN AND RURAL ENROLMENTS IN ALBERTA SCHOOLS AS OF SEPT 30, 1964-68

(from Department of Education 1969 Report)

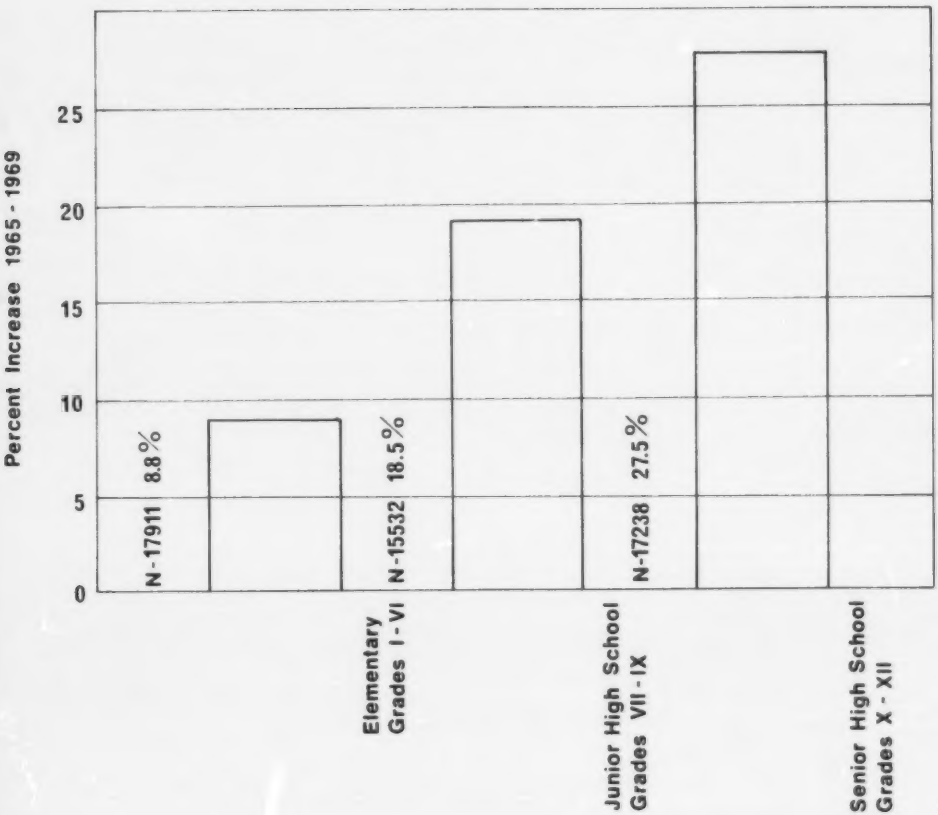

FIGURE 3

INCREASE IN ENROLMENTS 1965 - 1969

(From Department of Education Report 1969)

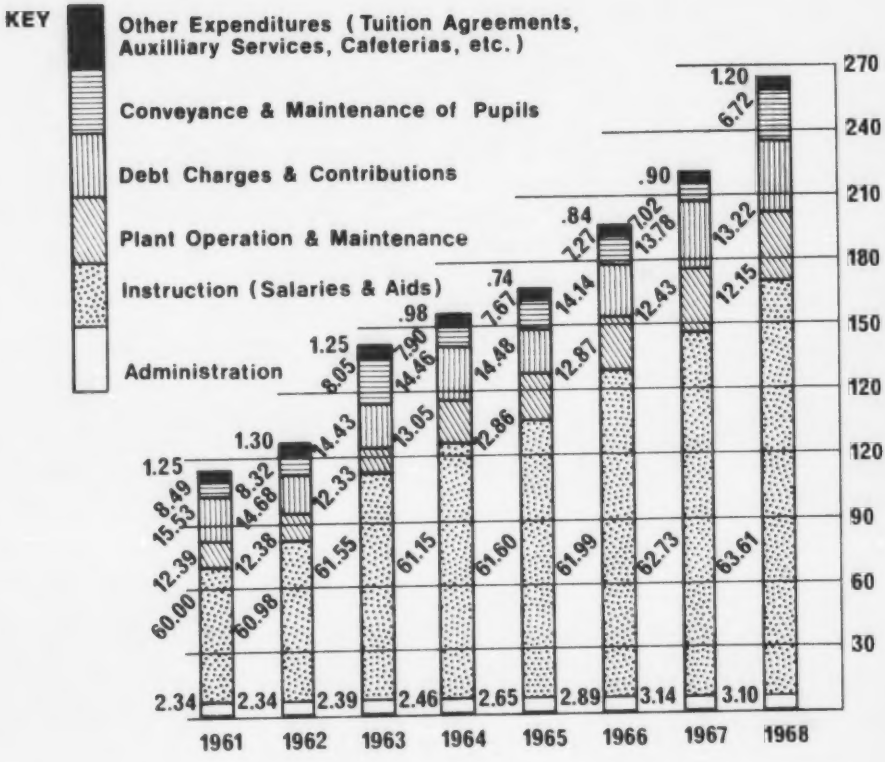

FIGURE 4

EXPENDITURES OF SCHOOL BOARDS 1961 - 1968

(From Department of Education 1969 Report)

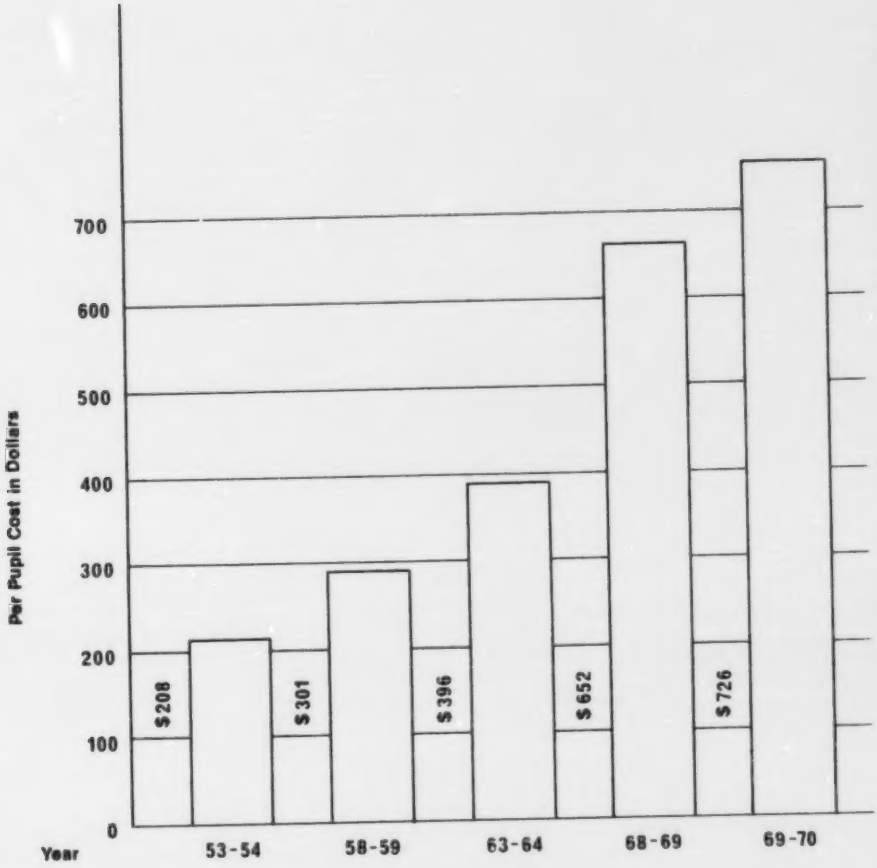

FIGURE 5

PER PUPIL COSTS 1953-1969

(From Department of Education 1969 Report)

commonly used as a measure of the educational "output" of our schools. A study conducted by the Dominion Bureau of Statistics[1] concludes that the educational level of the labor force in Canada (statistics for Alberta are not provided separately) is steadily increasing. In 1965, for example, 37.3 percent of males and 40.9 percent of females in the 20-24 age group of the labor force had completed high school, whereas only 21.2 percent of the males and 22 percent of the females in the 45-64 age group had completed high school.

In 1960, 20.3 percent of the labor force (age 14 and over) had completed high school. However, by 1965, this percentage had risen to 23.3. The report also presents data to show that the educational level of the labor force in 1965 was higher than it was for the total population within the same age groups. The report goes on to suggest that "the higher the level of education a person has achieved, the more likely it is the person will be in the labor force. This is definitely the case for females." Other statistics confirm that workers of low levels of educational attainment are more likely to be unemployed.

In comparison with the United States, however, Canada does not compare favorably. For example, in 1965, 33 percent of the American population 18 years of age and over, had completed high school, whereas only 16.5 percent of the Canadian population 17 years of age and over had reached a similar level of attainment. This gap, however, is narrowing slightly, especially for the 20-24 year olds.

Studies[2] conducted during the past five years have also shown high positive correlations between educational level and income, and between increases in gross national product and expenditures on education. Such results are often quoted as indications of educational output.

Institutions, Programs, Enrolments, and Costs: Post-Secondary

Upward extensions of the public school system beyond the secondary level include two institutes of technology under the jurisdiction of the Department of Education, three agricultural and

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1 Jon T. Innes, Paul B. Jacobson, Roland J. Pellegrin. *The Economic Returns to Education: A Survey of the Findings*, (Eugene, Oregon: The Center for the Advanced Study of Educational Administration), Feb. 1966.

2 Frank J. Whittingham. *Educational Attainment of the Canadian Population and Labour Force: 1960-1965*. (Ottawa: Dominion Bureau of Statistics), October, 1966.

vocational colleges under the jurisdiction of the Department of Agriculture, five community colleges under the advisory jurisdiction of the Colleges Commission, six private junior colleges, five vocational training centres under the Federal Department of Manpower, three health technology schools under the Department of Health, one forestry school under the Department of Lands and Forests, police training academies under various urban jurisdictions, prison schools, and training programs under the Attorney General's Department, and three universities under the advisory jurisdiction of the Universities Commission. Figure 6 shows the geographic location of the major institutions. Also included, as available to Albertans, but not necessarily in Alberta, would be the Canadian Forces training schools throughout the country, and numerous private schools and organizations (including trade schools) which provide educational opportunities. For example, an Association of Continuing Education consisting of twelve public and private educational and recreational organizations in the Edmonton area provides hundreds of courses of varying length in fields concerning practically all facets of human concern and interest.

Excluding the universities and the Canadian Forces Training schools, the publicly supported post-secondary institutions of the province offer different programs (comprising thousands of courses) which may be subsumed under nine broad categories: agriculture, arts and crafts, business and administration, communication, health and social welfare, home economics, industrial and technical, university transfer, and "miscellaneous." The institutes of technology provide a very large apprenticeship program under the industrial and technical category.

The universities offer a comparable range of programs, subsumed under the following faculties and schools: agriculture, arts, business administration and commerce, dental hygiene, dentistry, education, engineering, environmental design, fine arts, graduate studies, household economics, law, library science, medical lab science,medicine, music, nursing, pharmacy, physical education, rehabilitation medicine, science, and social work.

In addition to regular day school programs, the universities of Alberta provide for continuing education through evening credit, summer session, and extension programs. Evening credit programs extend the opportunity of those who have had some university education and who are working towards a diploma or degree, but for some reason are unable to attend classes during the day.

Although the summer session was originally designed to accommodate teachers who wish to further their education, more and more non-teachers are now attending. Many full-time university

TABLE 1

PROFESSIONAL STAFF OF POST-SECONDARY INSTITUTIONS
ON CAMPUS ON OR ABOUT DECEMBER 1, 1970

Institution	Full-time Prof. Staff "Permanent" and "Temporary"	Part-time Prof. Staff incl. Student-Assist.
Agricultural Colleges	70	70
Community Colleges	260	
Institutes of Technology	870	
Universities	2,300	3,350
TOTALS	3,500	3,420

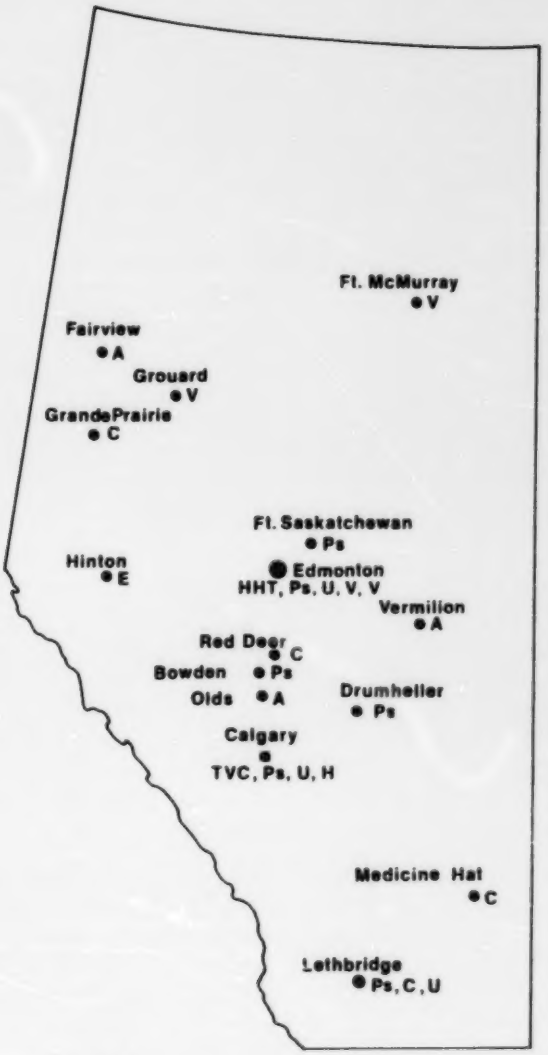

FIGURE 6

MAJOR POST-SECONDARY EDUCATIONAL INSTITUTIONS IN ALBERTA

students, for example, attend summer sessions to make up courses, raise their academic average, or complete the requirements for their degree in a shorter period of time.

Extension courses generally are adult and community oriented. Since they do not carry university credit, they have no admission requirements and no examinations are conducted. The aim of such courses is to extend the number and variety of learning opportunities for the whole community. The broad scope of courses offered provides for many special interest areas as is evident from a selection of course titles: "Decision Analysis," "Computing Science," "The Sociology of the Family," "Interior Design," "Wills and Estate Planning," "Income Tax," "Community Leadership," etc.

Unfortunately, most of those who currently register for extension courses are members of the middle and upper socio-economic classes who have had some university experience. Apparently people who have never attended a university are somewhat fearful of university settings. Innovative efforts are now being made, however, to overcome this public fear and consequently to serve a wider segment of the population. The University of Calgary, for example, presents a series of weekly, 40-minute, "lunch time" lectures which serve informally to introduce the university and its community services to the public. These lectures deal with a wide variety of controversial and general interest topics. They are held in a "down town" location and are open to the public free of charge.

Several "community education" programs are sponsored by various other jurisdictions including the community colleges and the public school systems. Such programs provide training of a recreational, cultural, practical, and personal nature in a broad spectrum of areas such as hunting, cycling, safety, first-aid, swimming, preventive health education, alcoholism and drug abuse, guidance, debtors assistance, etc.

The Colleges Commission is planning to detail all public and private non-university post-secondary programs and services, including those for adults, in its 1971 study entitled *Program Services Inventory*.

Most post-secondary institutions place certain restrictions on participation via pre-requisites, co-requisites, program patterns, entrance requirements, etc. These restrictions generally are academic in nature, marks and courses completed being the major criteria on which admittance is based. Although these restrictions have been fairly rigidly applied in the past, some post-secondary institutions are now beginning to admit a limited number of students on the basis of their maturity and potential to achieve. Such

students often face a screening test of some sort which attempts to ascertain their potential for success. If successful, candidates are then admitted as probationary students. The University of Alberta and The University of Calgary, for example, admit mature non-matriculated students to various programs. Students admitted to the universities on this basis included seven in 1965, eight in 1966, 178 in 1967, and 324 in 1968. Follow-up studies indicate that these students are highly motivated and generally succeed as well as younger matriculated university students.[1]

Data on the professional staff for post-secondary institutions are difficult to assemble. The multiple jurisdictions, the differing definitions of "permanent," "full-time," "part-time," etc., the differing lengths of terms or sessions and hence contracts, the multiplicity of professional qualifications, the summer, evening or extension component, and other complexities all militate against accuracy and precision. However, an attempt has been made to estimate gross data for the major institutions in Table 1.

Enrolments at post-secondary institutions are equally as difficult to obtain as staff data. Part of the picture is supplied by Table 2 and Figure 7, which summarize full-time enrolment for universities and university-level courses at colleges. The total number of full-time students participating in 1969-70 is 29,163 students or 16.8 percent of the 18-24 age group (See Table 2). A more realistic enrolment figure would include enrolments for the technical institutes and agricultural colleges, the non-university level college programs (Community Colleges estimate an enrolment of nearly 5,000 in 1970-71) and the part-time and "special" students in all of the institutions. The addition of these figures increases the total number of students served in 1969-70 substantially, to something in the order of 76,000, or upwards of 44 percent of the 18-24 age group. This participation percentage would be underestimated to the extent that enrolments in other (chiefly private) post-secondary programs are excluded. There is evidence to suggest that the enrolments not included would be considerable. Perhaps it would be safe to conclude that in 1969-70 well over 50 percent of the potential post-secondary population in Alberta participated either full-time or part-time in some form of post-secondary education.

According to the Seastone projections, which may be somewhat conservative, full-time enrolment in post-secondary institutions will exceed 85,000 by 1980, 97,000 by 1990, and 187,000 by 2005. These estimates represent participation rates of 31.5 percent, 37.6 percent and 50.4 percent respectively (See Table 3).

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[1] Vaselanak, M. "Admission of Mature Non-Matriculated Students into a Degree Program," *McGill Journal of Education*, Spring, 1970.

TABLE 2

UNIVERSITY-LEVEL FULL-TIME ENROLMENT IN ALBERTA[1]

YEAR	AT UNIVERSITIES				AT COLLEGES		UNIVERSITY LEVEL			
	ALBERTA (1908)	CALGARY (1966)	LETHBRIDGE (1967)[2]	UNIVERSITY TOTALS	PUBLIC COLLEGES[3]	PRIVATE COLLEGES[4]	COLLEGE TOTALS	GRAND TOTALS[5]	18-24 in ALBERTA[6]	UNIVERSITY LEVEL of 18-24
1957-58	4,224	419	0	4,643	25	86	111	4,754	117,000	4.1
1958-59	4,783	543	0	5,326	57	109	166	5,492	119,000	4.6
1959-60	5,205	684	0	5,889	62	74	136	5,889	122,000	4.9
1960-61	5,829	1,082	0	6,911	72	120	192	7,103	124,000	5.7
1961-62	6,602	1,443	0	8,045	130	279	409	8,454	126,000	6.7
1962-63	7,417	1,732	0	9,149	129	270	399	9,548	131,000	7.3
1963-64	8,185	2,108	0	10,293	151	336	487	10,780	136,000	7.9
1964-65	9,334	2,587	0	11,921	302	510	812	12,733	140,000	9.1
1965-66	10,274	3,268	0	13,542	546	489	1,035	14,577	145,000	10.1
1966-67	11,489	4,108	0	15,597	945	357	1,302	16,899	153,000	11.1
1967-68	13,027	4,980	638	18,645	743	365	1,108	19,753	160,000	12.3
1968-69	15,182	6,770	1,024	22,976	1,208	425	1,633	24,609	166,000	14.8
1969-70	17,354	7,962	1,261	26,577	2,104	482	2,586	29,163	174,000	16.8
1970-71										
1971-72										

NOTES:
1 Students who qualify for full grants from the Province are counted as full-time students.
2 LETHBRIDGE was a junior college only, to the fall of 1967. Enrolment data before 1967-68 are included under public colleges. The University of Lethbridge was proclaimed January 1, 1967.
3 PUBLIC COLLEGES include Grande Prairie (1966), Lethbridge (1957), Medicine Hat (1965), Mount Royal at Calgary (1966), and Red Deer (1964).
4 PRIVATE COLLEGES predominantly affiliated with Alberta universities include Camrose Lutheran, Canadian Union (Lacombe), College St. Jean (Edmonton), Concordia (Edmonton), St. Joseph's (Edmonton), and St. Stephen's (Edmonton). Mount Royal operated as a private college to the fall of 1966.
5 Calculations do not include students at technical institutes or agricultural colleges or those taking courses not classified as university level at colleges.
6 The 18-24 population is taken as of June 1 each year and is estimated for inter-census years.

SOURCE: University and College reports submitted to the Universities Commission with supplementary data from the Dominion Bureau of Statistics.

THE ALBERTA UNIVERSITIES COMMISSION
December 5, 1969.

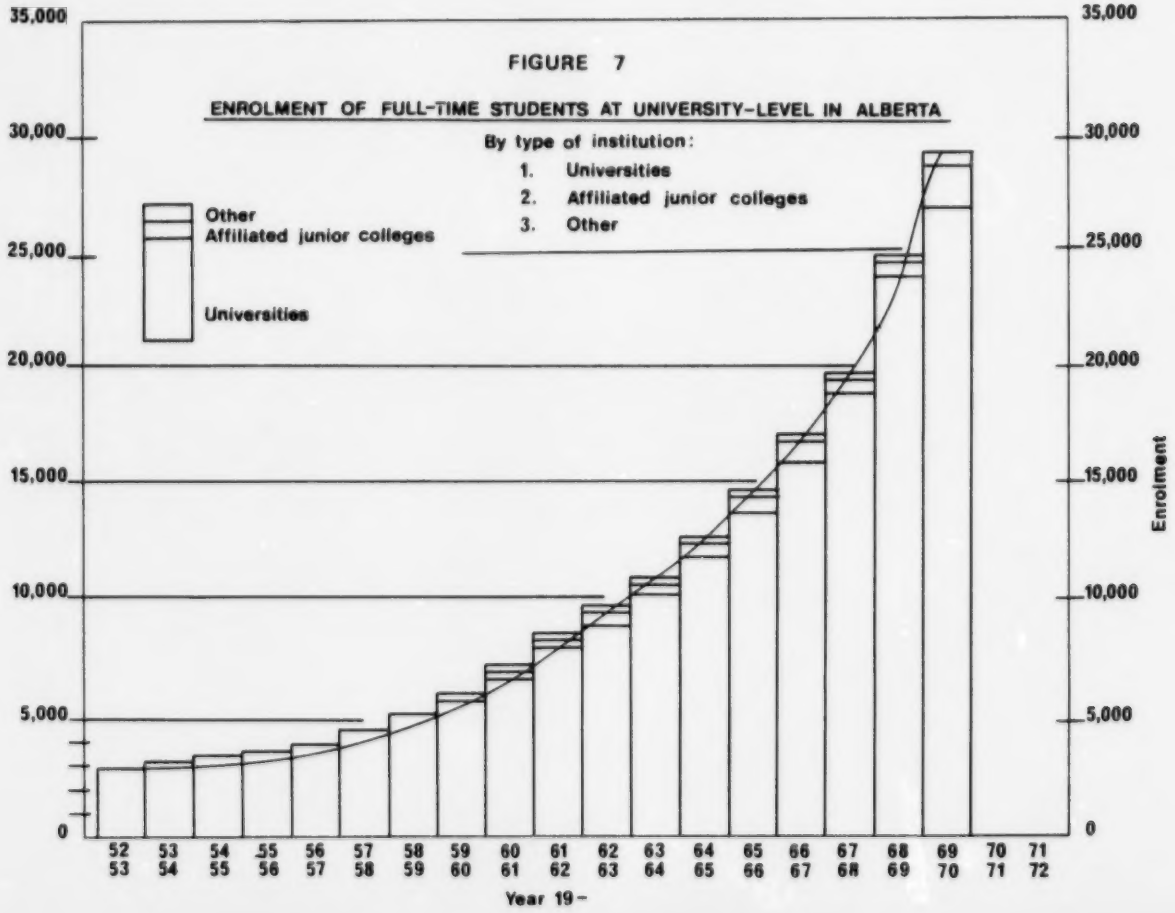
TABLE 3

ENROLMENT PROJECTIONS IN POST-SECONDARY INSTITUTIONS
BASED ON THE SEASTONE DATA

	1980	Participation rate (%)	1990	Participation rate (%)	2005	Participation rate (%)
Universities						
Full-time	58,000	21.5	63,000	25.6	121,000	34.4
Part-time	31,000		32,000		61,000	
TOTAL	89,000		95,000		182,000	
Non-University						
Full-time	27,600	10.0	29,600	12.0	57,000	16.0
Part-time	?		?		?	
TOTAL	27,600		29,600		57,000	
TOTAL FULL-TIME	85,600	31.5	92,600	37.6	178,000	50.4

FIGURE 7

ENROLMENT OF FULL-TIME STUDENTS AT UNIVERSITY-LEVEL IN ALBERTA



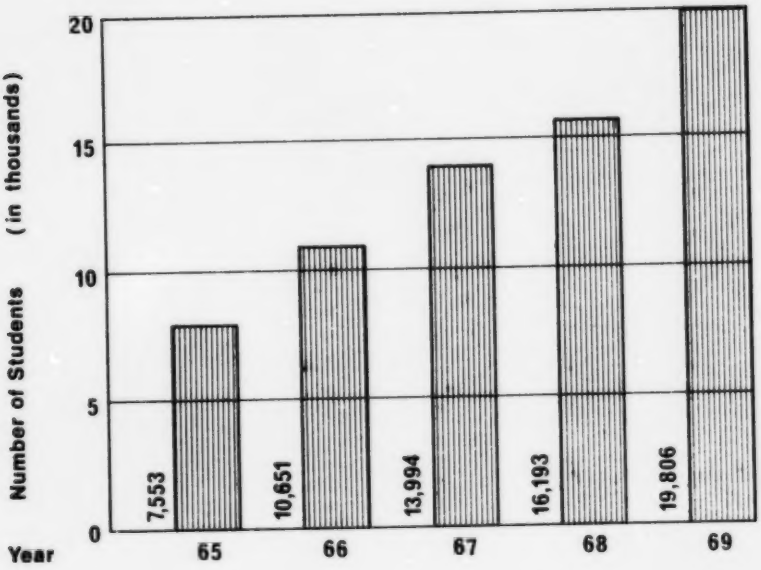


FIGURE 8

NUMBER OF STUDENTS RECEIVING FINANCIAL ASSISTANCE 1965 - 69

(From Department of Education 1969 Report)

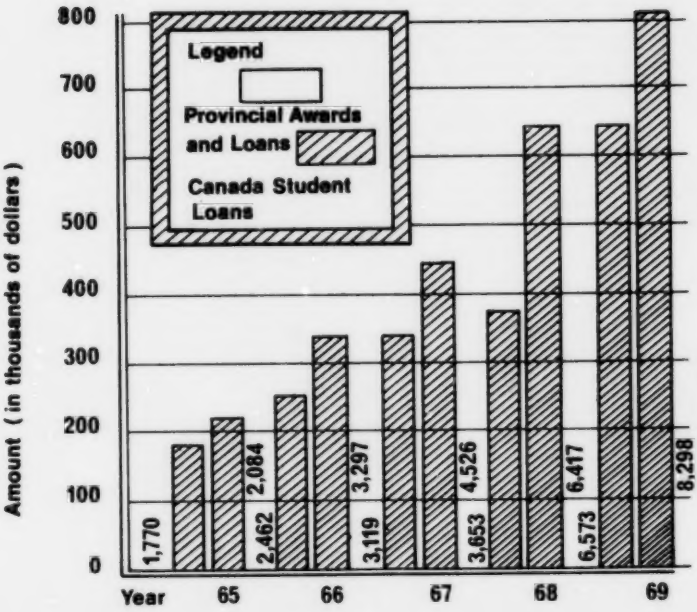


FIGURE 9

AMOUNT OF MONEY EXPENDED ON STUDENT ASSISTANCE 1965–1969

(From Department of Education 1969 Report)

Students in post-secondary institutions receive financial assistance of various types. The Student Assistance Board of the Department of Education provided the following summary.

Financial assistance to students takes three main forms:

Awards in the form of grants, scholarships, prizes, bursaries, and fellowships from the provincial government.

Canada Student Loans.

Province of Alberta Loans.

Estimates include full-time and part-time enrolments for the community colleges, technical institutes, and agricultural and vocational colleges. An adjustment has been made to account for evening, summer, correspondence, special, and other part-time students at the non-university post-secondary institutions. Excluded are extension enrolments at universities and agricultural and vocational colleges, on the assumption that many of these students would be outside the 18-24 age group.

Assistance is available for students from high school through post-secondary study in university. (Most of the funds go to post-secondary students). Figure 8 shows the remarkable growth in the number of students receiving assistance. In the four years from 1966 to 1970 the number receiving assistance had risen by 13,000, an amazing 222 percent. The rapid growth of financial assistance is further demonstrated by the fact that in 1970 the number of students receiving aid rose by 19 percent over the previous year. Figure 9 shows the dramatic increase in amounts of money awarded or loaned to students through Students' Assistance. In 1966 the total amount processed was $5,758,517.33. By 1970 this had increased fourfold to $20,165,229.29.

Alberta students have had an enviable record in repaying their student loans. In the past five years a total of $24,418.59 in loans has had to be written off. This represents only 0.0045 percent of the total amount in loans awarded. In addition, about 1,843 loans were in arrears at the end of 1970.

To the total assistance provided by the Students' Assistance Board ($14.1 million in 1968-69) should be added $5.7 million provided out of the operating funds of the universities, chiefly to graduate teaching and research assistants for services rendered. In addition, other scholarships, awards, bursaries, and grants are provided out of special university trust funds. These

other awards are not large in aggregate amount, but are very meaningful to the individual who receives help in this manner.

In 1968-69 operating expenditures for universities amounted to about $2,800 per full-time student (this includes expenditures designed to accommodate part-time students). In addition, capital expenditures for universities have averaged about $35 million per year during the past five years. According to the Seastone projections[1], operating expenditures per full-time student will be at least $5,600 per year by 1980, and capital expenditures are expected to be at least $72 million per year by 1980. Seastone's cost estimates for post-secondary non-university students are based on the assumption that it costs the province about half as much per student in operating expenditures for a non-university student as it does for a university student. Therefore, it is estimated that by 1980 it will cost at least $2,800 per student. The cost for 1968-69 was about $1,700 per student for community college students.

By 1980, total post-secondary costs (public community colleges, universities,and technical institutes) are estimated to be between $510 million and $865 million. In 1969-70 total costs were $154 million.

Although at the present time very little "output" data exists, other than the number of degrees awarded, attempts are being made to collect more relevant data on this type. For example, the *Labour Research and Immigration Branch* of the Alberta Department of Labour is presently conducting a study designed to "collect data on the number of persons who have attained a level of recognition in the educational system such as a degree, diploma or certificate." Data will also be collected "on the principal programs and subjects of study undertaken by each person. Subsequently an attempt will be made to establish the relationship that exists between the program of study and employment."

The survey will also collect data to be used as a measure of utilization of existing physical facilities used to produce graduates in the major educational institutions, so that the potential for increasing the number of graduates may be examined.

The Alberta Colleges Commission is considering an expansion in its collection of output data.

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1 *Op cit*, Seastone.

PART III ADDITIONAL DATA NEEDS

In order to assess educational opportunity in Alberta in terms of the concept of opportunity used in this review, it would be necessary to collect several types of data which are not presently collected. It would also be necessary to analyze and report much of the presently available data in different ways.

As previously reported, most data presently collected in Alberta, at the provincial level at any rate, are "input" data. In other words, data are collected on factors such as the number, nature, location, and size of systems and institutions; the nature of the instructional staff, the number and some characteristics of the "learning force," the general nature of programs offered, and the number of students enrolled in the various programs; and expenditures for various levels of education and certain types of programs (these are generally reported as total expenditures, expenditures per system or institution, and expenditures per student). Comparisons over time are generally made, as are comparisons of one level with another. However, the general unavailability of compatible data makes comparisons difficult.

Very few "output" or "performance" data are collected at the provincial level as yet. However, plans are underway to change this situation. The numbers of matricultants and graduates from the various institutions are collected, as are the retention and mobility rates in some institutions. These measures can be thought of as gross measures of output. Undoubtedly, the various institutions have more specific information on performance, but these are not readily available at the provincial level.

Information on the hopes, desires, wants, aspirations, and needs of the learning force is not generally available, except in a few isolated cases where data were collected primarily for research purposes. Comparative data on educational opportunity for various sub-groups of the population (e.g., native peoples, isolated communities, etc.), are not generally available, except for isolated research studies. There are, however, efforts being made at all levels of the educational system to establish uniform accounts and program budgeting systems which would make it possible to collect this type of information more readily.

What then, are the additional data needs which would make it possible to assess more accurately educational opportunity, as defined in this review?

Before the extent to which opportunities are being provided can be determined, the hopes, desires, wants, and aspirations of the learning force must be known. Therefore, instruments must be devised and a data collecting system must be developed so that this information can be made available.

As indicated previously, the extent of student satisfaction is probably one of the better indicators that his wants are being met. Therefore, measures of student satisfaction should be developed (some are already available) and data on student satisfaction should be collected. The indicators of satisfaction mentioned previously could be incorporated into these instruments.

Information on the extent to which internal and external constraints, as described above, are limiting the opportunities of individuals and groups to avail themselves of the educational programs they want and need, must also be collected. In order for this information to be collected, however, a system for determining these constraints must be devised and data collecting instruments developed.

In addition to information about the learning force, data on the educational institutions and the programs they offer must also be collected. Information such as the following would be necessary to assess the availability of opportunity: (1) the number and nature of stimulating and growth facilitating programs; (2) the presence or absence of rules and regulations which govern program choices; (3) the presence or absence of academic criteria for admission to programs and courses; (4) economic constraints such as fees, costs of books, supplies, etc.; (5) the availability of appropriate facilities, instructional staff materials, etc.; and (6) the presence of adequate diagnostic and counselling services. Although some of these data are presently collected, most of them are not. Instruments similar to the self-evaluation criteria developed by the Alberta Teachers' Association and others could well be used to collect this information.

PART IV POLICY ISSUES

Several policy issues, both for provincial and local decision makers, grow out of the concept of "opportunity" developed in this report, and the review of the educational data we were able to collect for the report.

(1) Is the major emphasis in education to continue as at present, in the 6-24 age group, or is it to shift somewhat in both directions to include early-childhood education and continuing education - in other words, "life-long" education?

There are indications of increasing pressure from several sources to extend educational opportunities at public expense below the age 6 level to include the 5-year-olds and possibly the 3- and 4-year-olds. In fact the Department of Education is presently funding two pilot projects in this area, and intends to evaluate them carefully using both effectiveness and costs criteria. The extension of opportunities in this direction, however, would cost money, which some agree could better be used in other ways. There is also increasing pressure to extend opportunities at public expense, at the post-secondary and adult education levels. However, such an extension would also use funds which some argue could be better used elsewhere. For example, in 1968-69 it cost $2,800 to educate a full-time university student, and $1,700 to educate a post-secondary non-university student.

These are important and immediate policy issues which both provincial and local decision makers must consider and act upon.

(2) On what purposes will we place the greatest emphasis in the future? Will we emphasize societal and manpower needs, or will we place increasing emphasis on the development of "free and creative individuals?"

It is generally recognized that governments will have to support all of these purposes, but where will priorities be placed? No society is likely to provide opportunities, at societal expense, for the individuals to satisfy all their educational wants; and in many cases society cannot allow individuals to develop certain of their educational wants or aspirations, if these are considered detrimental to the public good (e.g., skills of insurrection). However, where will the boundaries be placed? To what extent should society provide opportunities for the individual to satisfy his educational wants and to what extent should the individual find other ways and means of satisfying his wants?

Decision makers are under increasing pressure to come to grips with these issues.

(3) What concept, or concepts, of "educational opportunity" will be used to guide the development and evaluation of our educational systems? Will the "phenomenological" model, or the "equal-inputs" or "equal-outputs" model, or some other model be adopted? The decision might be to select one of these models or it might be to develop a combination of two or more. Each of these alternatives, if selected, would have serious implications for the type of educational system to be developed. Each also has its proponents who are pressing decision makers to rule in their favor.

(4) What type of "information" or "intelligence" systems will be developed and adopted for purposes of monitoring our educational system?

The type of "information systems" to be adopted will of course depend upon decisions about the purposes of education and the "opportunity" model to be applied. For example, our educational systems cannot be adequately evaluated on "equal-output" criteria if our information system is designed to gather only "input" data.

The implications of the various approaches suggested in these sets of policy questions are too numerous and too complex to deal with, even in a superficial way, in this review. Most of these questions require further policy research and much more searching analysis than was possible for this initial review. Future reviews and future research reports of HRRC and other organizations will deal with these issues in more detail.

At the present time, HRRC is conducting policy research, developmental studies, and evaluation studies which will provide much more information which can be used by decision makers as they grapple with these questions. The evaluation component of Project SEARCH is working on an "opportunities index" based on the concept of opportunity used in this review. The Educational Planning Mission, in cooperation with the Department of Education's PPBES projects, is developing models which should assist in developing better planning, information and intelligence systems. The "Baseline Studies in Individually Prescribed Instruction" project, and the Humanization of Learning Mission should provide invaluable information to decision makers as they consider the questions of educational goals and priorities. Our policy research in the area of Early Childhood Education, which we are conducting for the Department of Education,should assist in informing policy makers as they are considering the question of "Life-long" education.